AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended):   A method of detecting particles, comprising the following steps: ~~including~~

emitting a beam of radiation into a monitored region;

capturing images of the monitored region, having one or more image segments, with an image capture device; and

in a data processor, detecting a variation in scattered radiation in images of the monitored region indicating the presence of the particles.

Claim 2 (currently amended):   A method as claimed in claim 1, further comprising the step of ~~including~~ modulating the beam of radiation.

Claim 3 (original):   A method as claimed in claim 2, wherein scattered radiation within the zone is represented in one or more segments of a corresponding image, which allows for the location of the particles in the region to be identified.

Claim 4 (previously presented):   A method as claimed in claim 1, wherein the location of the particles is determined in accordance with a geometric relationship between the

locations of a source of emitted radiation, a direction of the emitted radiation and a point of

image detection wherein, the geometric relationship is determined from the images.

Claim 5 (previously presented):   A method as claimed in claim 1, wherein the

detected variation is an increase in scattered radiation intensity.

Claim 6 (previously presented):   The method as claimed in claim 1, wherein the

increase is assessed with reference to a threshold value.

Claim 7 (previously presented):   The method as claimed in claim 1, wherein the

threshold value is calculated by averaging integrated intensity values from the images.

Claim 8 (currently amended):   The method as claimed in claim 7, further

comprising the step of assigning different threshold values for different spatial positions within

the region.

Claim 9 (currently amended):   A method as claimed in claim 1, further comprising

the steps of directing the radiation along a path and identifying a target in the images, the target

representing a position at which the radiation is incident on an objective surface within the

region.

Claim 10 (previously presented):   A method as claimed in claim 1, wherein a location of the target in the images is monitored and the emission of radiation is ceased in response to a change in the location of the target.

Claim 11 (currently amended):   A method as claimed in claim 1, <u>further</u> comprising <u>the step of</u> identifying a location of an emitter in the images.

Claim 12 (currently amended):   A method as claimed in claim 1, <u>further</u> comprising <u>the step of</u> determining an operating condition of the emitter based on radiation intensity at the identified location of the emitter.

Claim 13 (previously presented):   A method as claimed in claim 1, wherein the images are processed as frames which are divided into sections which represent spatial positions within the monitored region.

Claim 14 (currently amended):   A method as claimed in claim 1, <u>further</u> comprising <u>the steps of</u> monitoring intensity levels in associated sections of the images and assigning different threshold values for different spatial positions within the region which correspond to the associated sections.

Claim 15 (withdrawn):   Apparatus for monitoring a region, comprising:

an emitter for directing a beam of radiation comprising at least one predetermined characteristic into the region;

an image capture device for obtaining at least one image of the region; and

a processor for analysing the at least one image to detect variation of the at least one

characteristic between the images, indicating presence of particles within the region.

Claim 16 (withdrawn):   Apparatus as claimed in claim 15, where the processor is

adapted to determine the location of particles in accordance with a geometric relationship

between the locations of the emitter, the directed beam of radiation and the image capture device

wherein, the geometric relationship is determined from the analysed images.

Claim 17 (withdrawn):   Apparatus as claimed in claim 16, comprising a plurality of

emitters, arranged to direct radiation along different respective beam paths.

Claim 18 (withdrawn):   The apparatus as claimed in claim 15, further comprising

one or more filters for adapting the image capture device to capture radiation from the emitter in

preference to radiation from other sources.

Claim 19 (withdrawn):   The apparatus as claimed in claim 15, wherein one of the

filters is a temporal filter.

Claim 20 (withdrawn):   The apparatus as claimed in claim 19, wherein one of the

filters is a spatial filter.

Claim 21 (withdrawn):   The apparatus as claimed in claim 19, wherein one of the

filters is a band-pass filter.

Claim 22 (withdrawn):   The apparatus as claimed in claim 19, wherein one of the

filters is a polarising filter.

Claim 23 (withdrawn):   The apparatus as claimed in claim 16, wherein the image

capture device comprises an attenuator.

Claim 24 (withdrawn):   The apparatus as claimed in claim 15, wherein the

attenuator comprises a variable aperture device.

Claim 25 (withdrawn):   The apparatus as claimed in claim 16, comprising a

plurality of image-capturing devices.

Claim 26 (withdrawn):   The apparatus of claim 16, wherein the image capture

device comprises a camera.

Claim 27 (withdrawn):   The apparatus of claim 16, wherein the emitter comprises a

laser.

Claim 28 (withdrawn):   A method of detecting particles comprising the steps of

determining a path of a beam of radiation comprising placing a first image capturing device to

view a source of the radiation and at least a part of the path of the beam of radiation;

communicating the position of the source to a processor; placing a second image capturing

device to view an impact point of the beam of radiation; communicating related position

information of the impact point to the processor; determining the path of the beam in accordance

with a geometric relationship between the position of the source and the position information of

the impact point.

Claim 29 (withdrawn):   A method of detecting particles comprising the steps of:

determining a region of interest containing a path of a beam of radiation comprising locating a

first point, being the position of a source of the beam, using an image capturing device; locating

a second point being the intersection of the beam of radiation with a field of view of the image

capturing device, determining the path of the beam in accordance with the first and second point;

calculating a region of interest containing the determined beard path.

Claim 30 (withdrawn):   A method as claimed in claim 28, wherein the step of

locating a second point is performed with at least one substantially transparent probe.

Claim 31 (withdrawn):   A method as claimed in claim 28, wherein the probe is

removed from the beam path.

Claim 32 (withdrawn):   A method of determining the level of smoke at one or more

subregions in a region of interest comprising: directing a beam of radiation within the region,

selecting a view of at least a portion of a path of the beam with an image capture device,

determining the location of the source of the radiation relative to the image capture device,

determining the direction of the beam relative to the image capture device, dividing the beam of

radiation into segments, determining a geometric relationship between the segments and the

image capture device, adjusting a level of light received by the image capture device of each

segment so as to allow for the geometric relationship.

Claim 33 (withdrawn):   A method as claimed in claim 32, wherein the segments

comprise at least one pixel.

Claim 34 (withdrawn):   A method as claimed in claim 32, wherein the segments are

grouped to form the subregions for smoke detection,

Claim 35 (previously presented):   Apparatus adapted to detect particles, said apparatus

comprising processor means adapted to operate in accordance with a predetermined instruction

set, said apparatus, in conjunction with said instruction set, being adapted to perform the method

as claimed in claim 1.

Claim 36 (previously presented):   A computer program product comprising; a

computer usable medium having computer readable program code and computer readable system

code embodied on said medium for detecting particles within a data processing system, said

computer program product comprising; computer readable code within said computer usable

medium for performing the method steps of claim 1.

Claim 37 (withdrawn):   A method of detecting particles including emitting a beam of radiation into a monitored region and detecting a variation in images of the region indicating the presence of the particles comprising assigning different threshold values for different spatial positions within the region.

Claim 38 (withdrawn):   A method as claimed in claim 37 including modulating the beam of radiation.

Claim 39 (withdrawn):   A method as claimed in claim 38, wherein scattered radiation within the zone is represented in one or more segments of a corresponding image, which allows for the location of the particles in the region to be identified.

Claim 40 (withdrawn):   A method as claimed in claim 39, wherein the location of the particles is determined in accordance with a geometric relationship between the locations of a source of emitted radiation, a direction of the emitted radiation and a point of image detection wherein, the geometric relationship is determined from the images.

Claims 41-49: (canceled).

Claim 50 (withdrawn):   Apparatus for monitoring a region, comprising:

an emitter for directing a beam of radiation comprising at least one predetermined characteristic into the region;

an image capture device for obtaining at least one image of the region; and

a processor for analysing the at least one image to detect variation of the at least one

characteristic between the images, indicating presence of particles within the region.

Claim 51 (withdrawn):   Apparatus as claimed in claim 16 where the processor is

adapted to determine the location of particles in accordance with a geometric relationship

between the locations of the emitter, the directed beam of radiation and the image capture device

wherein, the geometric relationship is determined from the analysed images.

Claim 52 (withdrawn):   Apparatus as claimed in claim 16, comprising a plurality of

emitters, arranged to direct radiation along different respective beam paths.

Claim 53 (withdrawn):   The apparatus as claimed in claim 18, further comprising

one or more filters for adapting the image capture device to capture radiation from the emitter in

preference to radiation from other sources.